

AMENDMENTS TO THE CLAIMS

Please cancel claim 3, amend claims 1, 2 and 4, and add claims 7-13 as follows:

1 1. (currently amended) A low-pressure mercury-vapor discharge
2 lamp comprising a discharge vessel—~~(10)~~,
3 which discharge vessel—~~(10)~~ encloses a discharge space—~~(11)~~
4 provided with a filling of mercury and an inert gas in a
5 gastight manner,
6 which discharge vessel—~~(10)~~ contains an amalgam—~~(63)~~ which
C1 7 communicates with the discharge space—~~(11)~~,
8 and the low-pressure mercury-vapor discharge lamp comprises
9 discharge means—~~(41a, 41b)~~ for maintaining an electric discharge
10 in the discharge space—~~(11)~~, wherein ~~characterized in that~~ the
11 amalgam—~~(63)~~ comprises a bismuth-lead compound having a lead
12 content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a bismuth
13 content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and a
14 mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 0.75$ at.%.

1 2. (currently amended) A low-pressure mercury-vapor discharge
2 lamp as claimed in claim 1, wherein ~~characterized in that~~ the
3 lead content lies in the range between $40 \leq \text{Pb} \leq 50$ at.%, and
4 the bismuth content lies in the range between $50 \leq \text{Bi} \leq 60$ at.%.

3. (cancelled)

1 4. (currently amended) A low-pressure mercury-vapor discharge
2 lamp as claimed in claim 17, wherein ~~characterized in that~~ the
3 gold content lies in the range between $8 \leq \text{Au} \leq 12$ at.%.

5. (cancelled.)

C1
Cnd
1 6. (previously amended) An amalgam for use in a low-pressure
2 mercury-vapor discharge lamp as claimed in claim 1.

1 7. (re-presented - formerly dependent claim #3) A low-pressure
2 mercury-vapor discharge lamp comprising a discharge vessel,
3 the discharge vessel enclosing a discharge space provided
4 with a filling of mercury and an inert gas in a gastight manner,
5 the discharge vessel containing an amalgam which
6 communicates with the discharge space,
7 and the low-pressure mercury-vapor discharge lamp
8 comprising discharge means for maintaining an electric discharge
9 in the discharge space,

10 the amalgam comprising a bismuth-lead compound having a
11 lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a
12 bismuth content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and
13 a mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 0.75$

14 at.%,

15 the amalgam further comprising gold, the gold content (Au)
16 lying in the range between $0.1 \leq \text{Au} \leq 20$ at.%.

1 8. (new) An amalgam for use in a low-pressure mercury-vapor
2 discharge lamp as claimed in claim 7.

C1
Cont 1 9. (new) A low-pressure mercury-vapor discharge lamp comprising
2 a discharge vessel,

3 the discharge vessel enclosing a discharge space provided
4 with a filling of mercury and an inert gas in a gastight manner,
5 the discharge vessel containing an amalgam which
6 communicates with the discharge space,

7 the low-pressure mercury-vapor discharge lamp comprising
8 discharge means for maintaining an electric discharge in the
9 discharge space,

10 the amalgam comprising a bismuth-lead compound having a
11 lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a
12 bismuth content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and
13 a mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 1$ at.%,
14 and

15 a temperature of the coldest spot of the discharge vessel
16 during operation of the lamp being in the range between 65°C and

17 165°C.

1 10. (new) The low-pressure mercury-vapor discharge lamp of claim
2 9 wherein the temperature of the coldest spot of the discharge
3 vessel during operation of the lamp is in the range between 120°C
4 and 165°C.

CI
Cont. 1 11. (new) The low-pressure mercury-vapor discharge lamp of claim
2 9 wherein the amalgam has a mercury content (Hg) in the range
3 between $0.05 \leq \text{Hg} \leq 0.75$ at.%.
.

1 12. (new) A low-pressure mercury-vapor discharge lamp comprising
2 a discharge vessel,
3 the discharge vessel enclosing a discharge space provided
4 with a filling of mercury and an inert gas in a gastight manner,
5 the discharge vessel containing an amalgam which
6 communicates with the discharge space,
7 the low-pressure mercury-vapor discharge lamp comprising
8 discharge means for maintaining an electric discharge in the
9 discharge space,
10 the amalgam comprising a bismuth-lead compound having a
11 lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a
12 bismuth content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and
13 a mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 0.75$

14 at.%, and

15 the range of nominal operation of the lamp including
16 operation with an amalgam temperature between 120°C and 165°C.

1 13. (new) A low-pressure mercury-vapor discharge lamp comprising
2 a discharge vessel,

3 the discharge vessel enclosing a discharge space provided
C1
Cmel. 4 with a filling of mercury and an inert gas in a gastight manner,
5 the discharge vessel containing an amalgam which
6 communicates with the discharge space,

7 the low-pressure mercury-vapor discharge lamp comprising
8 discharge means for maintaining an electric discharge in the
9 discharge space,

10 the amalgam comprising a bismuth-lead compound having a
11 lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a
12 bismuth content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and
13 a mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 1$ at.%,
14 and

15 the lamp having a radiation output at an optimal mercury
16 vapor pressure and being configured to operate at at least 80%
17 of said radiation output over a range of amalgam temperatures
18 between 65°C and 165°C.